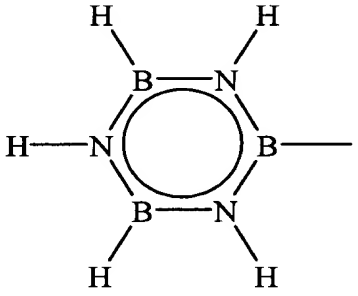
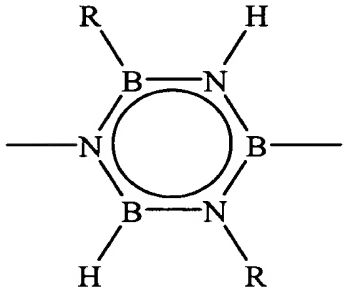
REMARKS

The rejection of Claims 1 and 3-9 under 35 U.S.C. § 103(a) as unpatentable over Paine et al, "Recent Developments in Borazine-Based Polymers," *Am. Chem Soc.* (1994), Chapter 27, pages 358-74 (Paine et al), is respectfully traversed.

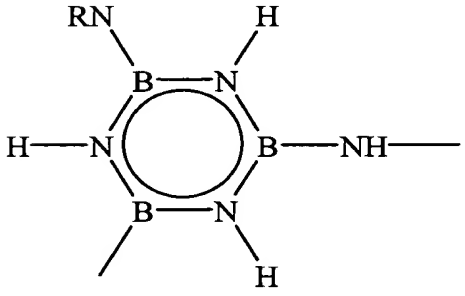
The present invention is based on Applicants' discovery that inorganic or organic compounds having a particular borazine skeletal moiety therein can result in materials having a relatively low dielectric constant and relatively high thermal resistance. The moieties may have one of the following formulae (1), (2), or (3):



. . . (1)



R=H or borazinyl . . . (2)



R=H_2, $(borazinyl)_2$, or H+borazinyl . . . (3)

As recited in present Claim 1, the claimed invention is an insulation film between semiconductor layers comprising the above-discussed material. As described in the specification at page 16, lines 7-10, since electronic signal retardation becomes small by applying the insulation film to a semiconductor device such as a IC substrate or electric appliances, high speed of the device can be achieved.

Paine et al discloses various borazine-based polymers, methods of making them, and some uses thereof. Indeed, Paine et al is described in the specification herein at page 11, lines 14-21 as a source for a method of making materials of the present invention. However, Paine et al neither discloses nor suggests the use of their polymers *per se* in film form, let alone as an insulation film between semiconductor layers in a semiconductor device, let alone as an insulation film between semiconductor layers in a semiconductor device wherein the film has a dielectric constant of at most 2.4 and a thermal resistance of at least 450°C. Rather, Paine et al discloses their borazine-based polymers as chemical precursors of boron nitride, as well as a "reagent for the formation of new composite metal-nitride/metal-boride materials that have improved properties over the individual pure phase metal boride or nitride" (page 364, first and second paragraphs). While the Examiner relies on the disclosure of processing polymer solutions to form, *inter alia*, coatings, xerogels, and aerogels (page 367, first full paragraph), the Examiner has ignored the description therein that all of these forms "are converted to BN [boron nitride] in these forms." In the present invention, on the other hand, the film is of a material containing a borazine moiety, not boron nitride *per se*.

Indeed, Paine et al is no more relevant than previously-applied, and now withdrawn, U.S. 5,188,757 to Paine, Jr. et al, and arguments in traversal of Paine, Jr. et al apply herein as well.

For all the above reasons, it is respectfully requested that the rejection over Paine et al be withdrawn.

Applicants respectfully traverse the finality of the Office Action. As Applicants noted in the previous response, the Examiner had failed to consider an IDS filed August 31, 2001. Applicants urged that since the date of the IDS was before the date of the previous Office Action (dated March 1, 2004) and thus technically was part of the Official file as of that Office Action date, the next Office Action, if containing a new ground of rejection relying in whole or in part on any of the references cited in the IDS, not be made Final, even if the new rejection was necessitated by the present amendment to the claims. Yet, the Examiner has made the Office Action Final anyway. This is improper. The Office Action dated March 1, 2004 was incomplete. The Examiner could have entered a rejection in the first Office Action over Paine et al, whereby Applicants would have had an opportunity to amend the claims in response thereto as a matter of right. The finality of the present Office Action forecloses this possibility.

In addition, the Examiner has improperly not considered the references designated as AAA and AAB in the IDS. However, this IDS included a Statement of Relevancy for these references. Thus, according to MPEP § 609, when a foreign language reference is submitted with a Statement of Relevancy, it **must** be considered. **Submitted herewith** is another copy of the Form PTO-1449 containing these references. The Examiner is respectfully requested to initial the box appropriate for references AAA and AAB, and include a copy thereof with the next Office communication.

Finally, the Examiner finds that "[b]oth the [Fazen et al] and [Narula et al] references cited in the [IDS] read on the instant invention." These references were designated as AAD and AAE in the IDS. If the Examiner believes that the presently-claimed invention is unpatentable over either of these references, then a rejection should have been made over them, giving Applicants an opportunity to respond. Nevertheless, neither Fazen et al nor

Narula et al disclose or otherwise suggest the presently-claimed invention. Neither reference discloses or suggests any utility other than as a precursor for boron nitride.

All of the presently pending claims in this application are now believed to be in immediate condition for allowance. Accordingly, the Examiner is respectfully requested to pass this application to issue with all pending claims.

Respectfully submitted,

OBLON, SPIVAK, McCLELLAND,
MAIER & NEUSTADT, P.C.
Norman F. Oblon

Harris A. Pitlick
Registration No. 38,779

Customer Number
22850

Tel: (703) 413-3000
Fax: (703) 413 -2220
(OSMMN 08/03)
NFO/HAP/cja